Development of a Public Participatory Geographic Information Systems (PPGIS) Portal to Communicate Risk from Potential Exposure to Airborne Environmental Contaminants in a Vulnerable Columbus, OH Community

Purpose

The purpose of the study is to integrate PPGIS to encourage Columbus community members to utilize the findings in future risk communication of possible adverse health outcomes from environmental exposures. Soil sampling and analysis from residents and impacted communities will help to identify environmental exposures that may be related to disparate health outcomes.

Impact

To partner with the local community organizations and stakeholders to reduce disparate health outcomes in Columbus, Ohio.

Maintain an interactive mapping website to provide community members with access to environmental health data to develop evidence-based health promotion and public/ environmental health interventions.

Encourage communication and learning among academic and community partners to conduct and disseminate research findings that will result in improved health equity.

Ohio State Colleges/Units Involved

College of Public Health
Division of Environmental Health Sciences

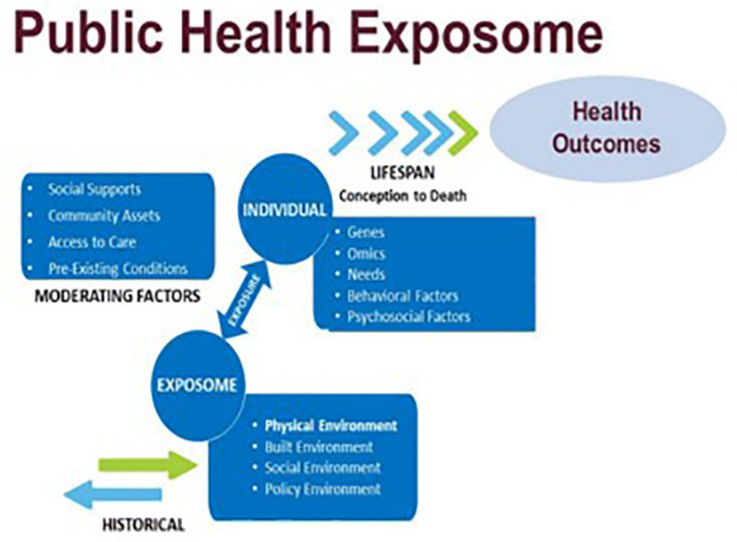
Community Partners Involved

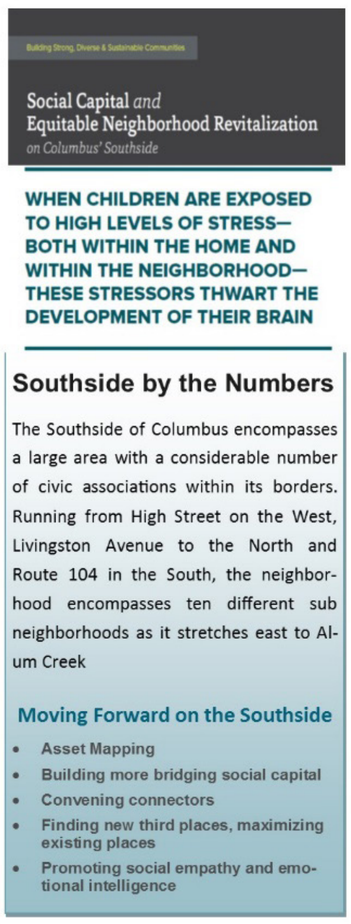
Columbus Public Health
South Side Health Advisory Committee Community Partners
CareSource of Ohio

Contact

Darryl B. Hood
Associate Professor
College of Public Health
hood.188@osu.edu
mappler.info/ohio

THE OHIO STATE UNIVERSITY




Building Strong, Diverse & Sustainable Communities

Social Capital *and* Equitable Neighborhood Revitalization *on Columbus' Southside*

WHEN CHILDREN ARE EXPOSED TO HIGH LEVELS OF STRESS—BOTH WITHIN THE HOME AND WITHIN THE NEIGHBORHOOD—THESE STRESSORS THWART THE DEVELOPMENT OF THEIR BRAIN

Southside by the Numbers

The Southside of Columbus encompasses a large area with a considerable number of civic associations within its borders. Running from High Street on the West, Livingston Avenue to the North and Route 104 in the South, the neighborhood encompasses ten different sub neighborhoods as it stretches east to Alum Creek

Moving Forward on the Southside

- Asset Mapping
- Building more bridging social capital
- Convening connectors
- Finding new third places, maximizing existing places
- Promoting social empathy and emotional intelligence

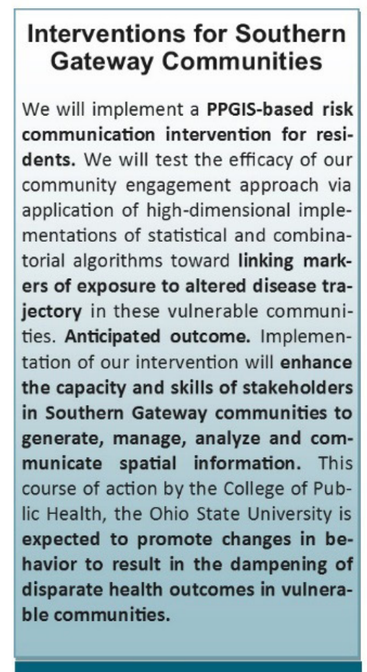

Mappler

Mappler technology, allow users to create their own mobile/web-based mapping application to visualize points of interests for their projects and needs. The web-based Mappler integrates the google mapping to visually display information for users. The mobile-based Mappler offers real time data collection to supplement the Mappler website

- **Use pinpoints to identify points of interests**
- **Environmental legend**
- **Integrate EPA toxic release inventory data**

How to use Mappler?

Master Mappler Apps in 3 steps


Interventions for Southern Gateway Communities

We will implement a **PPGIS-based risk communication intervention for residents.** We will test the efficacy of our community engagement approach via application of high-dimensional implementations of statistical and combinatorial algorithms toward **linking markers of exposure to altered disease trajectory** in these vulnerable communities. **Anticipated outcome.** Implementation of our intervention will **enhance the capacity and skills of stakeholders in Southern Gateway communities to generate, manage, analyze and communicate spatial information.** This course of action by the College of Public Health, the Ohio State University is **expected to promote changes in behavior to result in the dampening of disparate health outcomes in vulnerable communities.**

Contact Us

Dr. Darryl B. Hood
408 Cunz Hall
Columbus, Ohio 43210

(614) 247-4941
Hood.188@osu.edu

Visit us on the web: http://cph.osu.edu/people/dhood